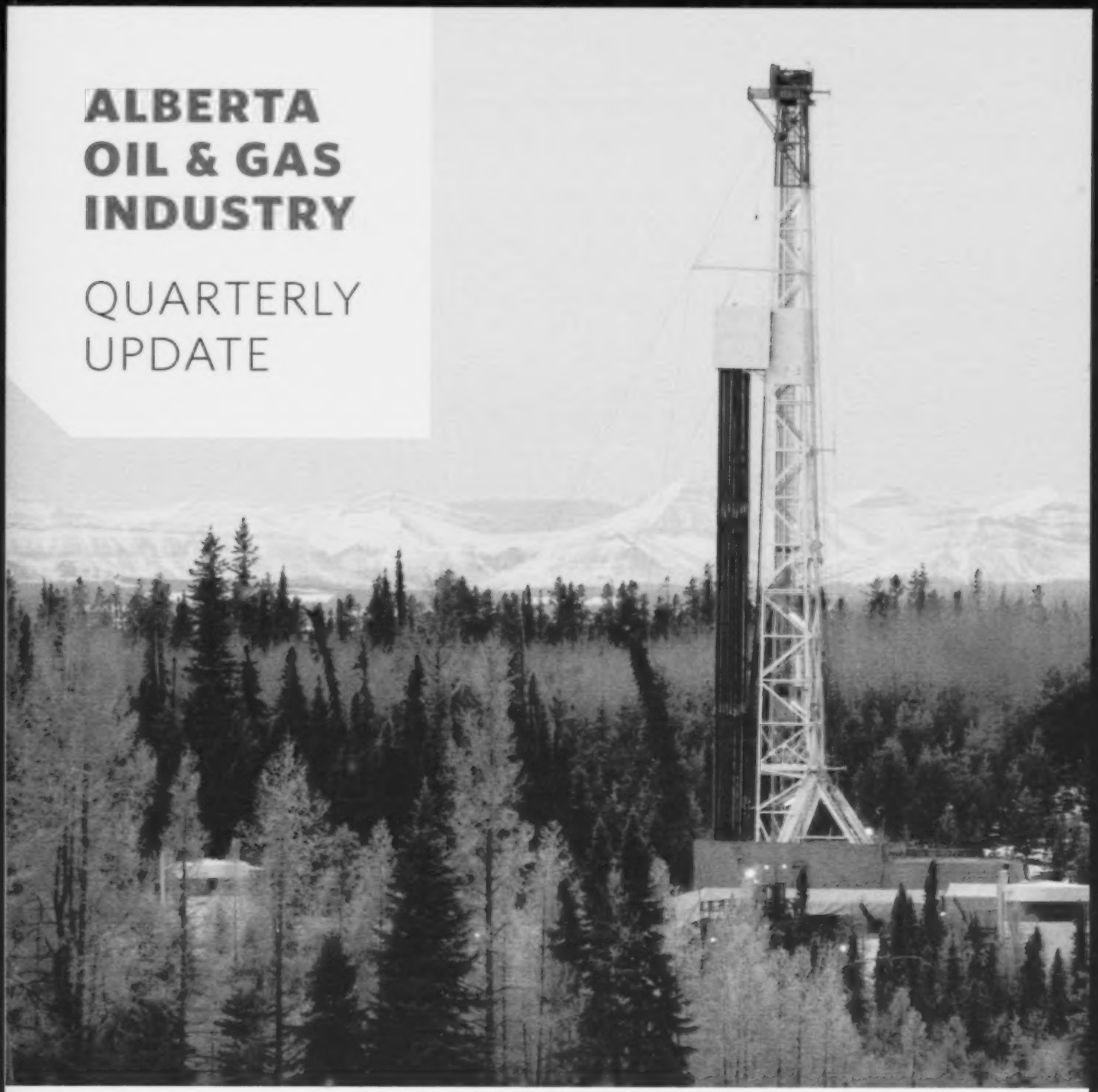
ALBERTA OIL & GAS INDUSTRY

QUARTERLY UPDATE



WINTER 2017

Reporting period:
SEPTEMBER 7, 2017, TO DECEMBER 7, 2017

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ALL ABOUT ALBERTA'S OIL & GAS INDUSTRY

ABUNDANT: ALBERTA'S CRUDE OIL, NATURAL GAS AND NATURAL GAS LIQUIDS RESOURCES

Alberta's vast crude oil and natural gas resources are the backbone of the provincial economy and a vital element of Canada's economy. In fact, energy development is the largest contributor to the province's gross domestic product, capital investments and exports.

The increased implementation of long horizontal wells and multistage fracturing in tight sand and shale resource plays across the province—not to mention attractive provincial royalty incentives to encourage drilling—have allowed industry to extract crude, natural gas and natural gas liquids (NGLs) from resource bases that had previously been essentially untapped.

In Alberta, the advanced drilling and hydraulic fracturing technology is being used in an increasing number of oil plays. Among the most advanced plays are the Cardium in west-central Alberta and the Viking in east-central Alberta. More importantly, emerging liquids-rich plays like the Montney and the Duvernay continue to show great promise.

Although drilling activity has slowed the past few years because of the weak global commodity price environment, capital spending and drilling activity is slowly picking up in 2017 as prices have modestly rebounded. Many producers continue to report improved results and liquids yields from their Duvernay and Montney programs.

Faced with continued low global crude oil prices and weak natural gas prices, Alberta producers sought additional cost savings and curtailed capital budgets and activity in 2016. Capital expenditures fell for a second year. Conventional oil and gas wells placed on production dropped by 37.2 per cent in 2016 relative to 2015, and crude oil production and natural gas production declined as a result.

However, some positive news also emerged in 2016. The Canadian government approved two major crude oil pipeline projects: the twinning of the Kinder Morgan Trans Mountain Pipeline to Canada's west coast and the replacement of the Enbridge Line 3 pipeline to the U.S. Midwest. These projects, if completed, will increase Alberta's export capacity, and the Trans Mountain Pipeline will open up market access to Asia.

According to the Alberta Energy Regulator (AER), in 2016, Alberta produced 67 per cent of Canada's natural gas and 81 per cent of Canada's oil and equivalent. More than 60 per cent of Canada's total oil and equivalent production was marketable bitumen.

Conventional crude oil production in 2016 was an estimated 441,000 bbls/d, a decrease of about 16 per cent from 2015 due to lower crude oil prices, which resulted in fewer wells placed on production.

Overall marketable natural gas production in Alberta, which includes growing liquids-rich shale/tight gas volumes, increased for the second year in a row in 2015, growing by 2.2 per cent to 298.6 million cubic metres per day from 292.1 million cubic metres, due to the lag effect from high drilling levels in 2014.

However, in 2016 production of natural gas declined year over year for the first time since 2013, with production estimated to have decreased by 1.8 per cent to 291.9 million cubic metres a day.

Despite the decrease in overall production, production from the Montney and Upper Mannville formations continued to grow, contributing 42 per cent of Alberta's raw natural gas production in 2016, up from 38.2 per cent in 2015. Production gains in these areas were largely associated with new wells placed on production using horizontal multistage fracturing, clearly illustrating the importance of production from these prolific wells.

Raw natural gas as it comes from the wellhead is mostly comprised of methane (the largest constituent of household natural gas), but it also contains various NGLs. Alberta is a major producer of NGLs, which consist of ethane, propane, butanes and pentanes plus.

In 2016, the Alberta government announced a Petrochemicals Diversification Program that will give $500 million in incentives through royalty credits to new petrochemical facilities in Alberta. To get up and running, these facilities will need certain NGLs as ingredients, or "feedstock."

Alberta is already a leading petrochemical manufacturing province, home to four major ethylene plants with a combined annual production capacity of 8.6 billion pounds. Two of these plants—at Joffre and Fort Saskatchewan—are among the world's largest.

Many investment opportunities exists in Alberta's refining and petrochemical sector, particularly in Alberta's Industrial Heartland, a 589-square-kilometre region northeast of Edmonton that is home to Canada's largest concentration of petrochemical and chemical processors and petroleum refining. ■

NOTE: This publication contains information about Alberta's oil and gas industry, excluding the oil sands. For information on the oil sands, please refer to the *Alberta Oil Sands Industry Quarterly Update* on this website.

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OIL PLAYS

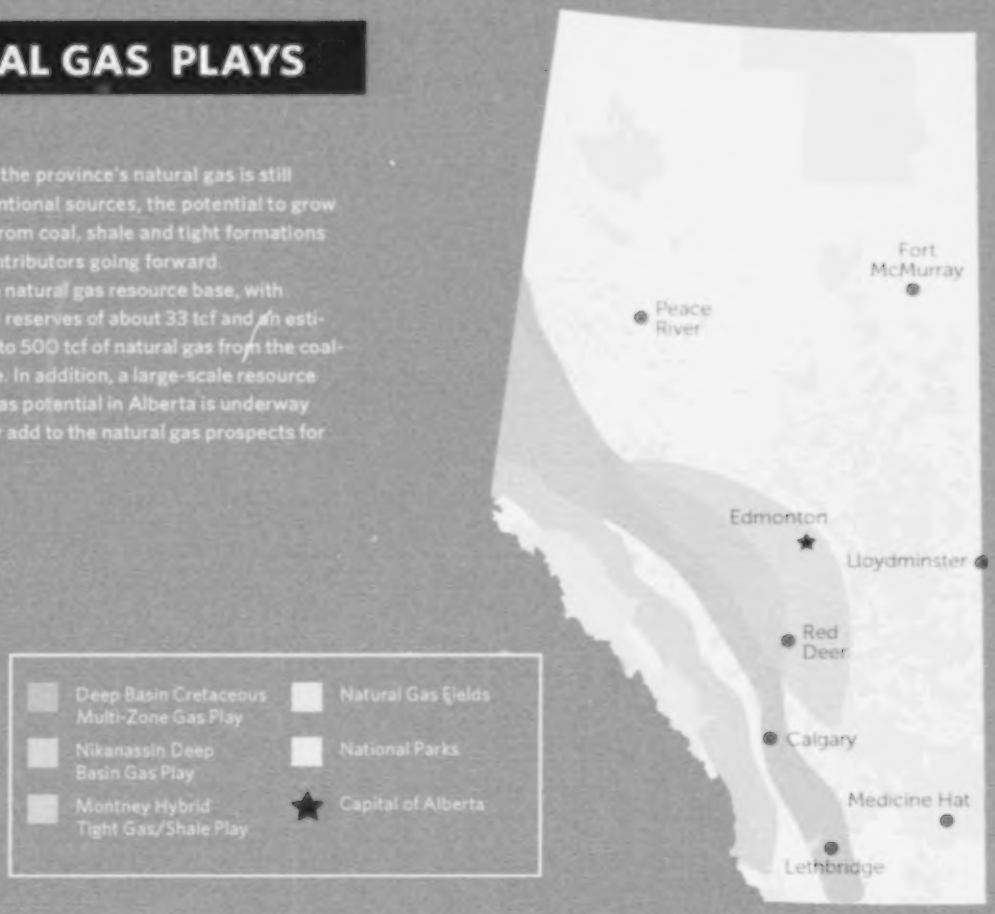
The Alberta Energy Regulator (AER) estimates that the province has 1.8 billion barrels of remaining established reserves of conventional crude oil, with ultimate potential (recoverable) of 19.7 billion barrels. The remaining established reserves of conventional crude oil in Alberta represent more than one-third of Canada's remaining conventional reserves.

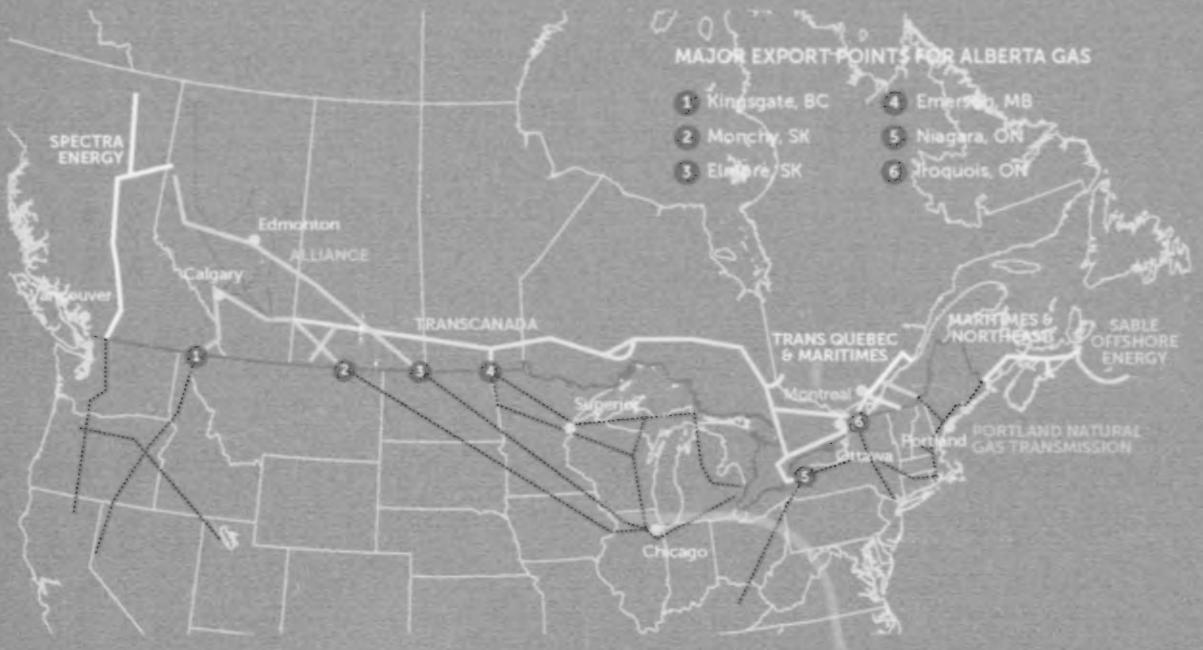
In 1994, based on the geological prospects at that time, the AER estimated the ultimate potential of conventional crude oil to be 19.7 billion barrels. Given recent reserve growth in low-permeability, or tight oil, plays, the AER believes that this estimate may be low.

NATURAL GAS PLAYS

While the majority of the province's natural gas is still produced from conventional sources, the potential to grow natural gas volumes from coal, shale and tight formations will also be strong contributors going forward.

Alberta has a large natural gas resource base, with remaining established reserves of about 33 tcf and an estimated potential of up to 500 tcf of natural gas from the coal-bed methane resource. In addition, a large-scale resource assessment of shale gas potential in Alberta is underway and could significantly add to the natural gas prospects for the province.





TOP PLAYS

MAP: NATIONAL ENERGY BOARD

NEB ASSESSES DUVERNAY ECONOMIC RESOURCES

Following a recent study that assessed the Alberta Duvernay shale play's marketable petroleum resources, Canada's National Energy Board (NEB) assessed the Duvernay's economic resources in a new report.

At 2017 light sweet crude oil prices, natural gas prices and well costs, the Duvernay shale's economic oil resource is 156 million cubic metres or one billion barrels, about one-third of the Duvernay's marketable oil resource, according to the report.

Meanwhile, the Duvernay shale's economic natural gas resource is 339 billion cubic metres (12 tcf), 16 per cent of the Duvernay's marketable natural gas resource. The Duvernay shale's economic natural gas liquid (NGL) resource is 216 million cubic metres (1.4 billion barrels), about one fifth of the Duvernay's marketable NGL resource.

Marketable petroleum resources are the amount of sales-quality petroleum that can be recovered from a formation using existing technology. Economic resources are a subset of marketable resources and estimate how much of that marketable petroleum is economic to recover under certain economic conditions.

Should well costs continue to fall and crude oil and natural gas prices modestly rise, the Duvernay shale's economic oil resource would increase to 350 million cubic metres (2.2 billion barrels), almost two thirds of the Duvernay's marketable oil resources. Its economic natural gas resource would increase to 932 billion cubic metres (32.9 tcf), over 40 per cent of its marketable natural gas resources, and its NGL resource would increase to 536 million cubic metres (3.4 billion barrels), over half of the Duvernay's marketable NGL resources.

"Duvernay shale economics are very sensitive to declines in well costs," the NEB stated. "As well costs fall, increases to oil and gas prices cause economic resources to grow more rapidly than they would with higher well costs (i.e., the supply-cost curves flatten, and even small increases to prices can significantly increase the amount of economic resources). Well performance that improves at the same scale of falling well costs would likely affect economic resources in a similar manner."

CHEVRON ADVANCING ITS DUVERNAY PROGRAM

Chevron is moving ahead with commercial development on its Duvernay shale acreage, six years after commencing exploration activities in the play.

The company says the Duvernay — an early-stage liquids rich natural gas resource in west-central Alberta — is "considered one of the most promising shale opportunities on the continent."

Chevron says the initial development will take place at East Kaybob on about 55,000 of the 330,000-acre Duvernay position it shares with KUFPEC Canada, a subsidiary of Kuwait Foreign Petroleum Exploration Company.

Chevron owns 70 per cent of the partnership and is the operator, while KUFPEC holds the remaining 30 percent.

The program will utilize long-term infrastructure development and service agreements with Pembina Pipeline and Keyera, with service expected to be

CONTINUED →

TOP PLAYS CONTINUED

available during the second half of 2019, Chevron says.

Pembina also announced that it will construct and operate $290 million of Duvernay infrastructure under an agreement with Chevron.

This includes Duvernay II, a replica of Pembina's existing Duvernay facility.

In the second half of 2014, Chevron commenced a pad drilling program to evaluate well production rates and reservoir performance. Drilling continued during 2016 on an appraisal and land retention program. A total of 53 wells had been tied into production facilities by early 2017.

Chevron commenced an exploration program in the Duvernay in 2011, subsequently drilling 16 horizontal wells and completing 13 wells using multistage hydraulic fracturing, it says.

DUVERNAY DRIVES NOVEMBER CROWN LAND SALE

The Duvernay drove interest in Alberta's Nov. 8 sale—a common narrative in 2017—as industry spent $44.95 million on Crown land.

A total of 79,701 hectares exchanged hands at an average price of $563.98. The Duvernay dominated the November 8 land sale, with several parcels in the East and West Shale basins fetching in the millions of dollars, noted Michele Innes, exploration analyst with Canadian Discovery.

Year-to-date, the government has attracted $481.77 million in bonus bids on 1.18 million hectares at an average price of $409.10 per hectare.

In the East Shale Basin, parcels in the Rumsey/Ghost Pine/Elnora area sold at some of the highest prices on a per-hectare basis (up to $3,753). These parcels are adjacent to parcels sold earlier this year, and seem to be pushing the Duvernay play even further to the northeast of Artis Exploration's wells at Huxley.

In the West Shale Basin, several multimillion-dollar parcels were clustered in the northeast area of the Pembina Field, expanding the Duvernay play to the northeast of Resourceful Petroleum's producers, added Innes.

"A very interesting land sale—clearly, the relatively recent interest in the southern portions of the Duvernay play trend was a big factor, but there were a number of other high-bid parcels," said Brad Hayes, president of Petrel Robertson Consulting. "I'm surprised to see the overall bid levels coming back as strongly as they are—while industry is being cautious overall with respect to recent oil and condensate price increases, there appears to be sufficient optimism to drive more aggressive land strategies." ■

majorprojects.alberta.ca

ALBERTA MAJOR PROJECTS

An inventory of private and public sector projects in Alberta valued at $5 million or greater

127 oil & gas, pipeline and industrial projects valued at $176.9B

Alberta Government

Alberta

Alberta Export Expansion Package

The Government of Alberta is supporting more Alberta companies to export to new international markets with several new programs.

Ready to export?

If you're looking to explore new business opportunities around the world, we can help. The **Export Support Fund** provides up to $20,000 to cover costs associated with entering new markets, such as marketing and attending international trade shows.

Need help deciding?

Set your business up for success with an international market entry strategy. The **Export Readiness Micro-Voucher Program** offers up to $5,000 in funding for export experts to create your strategy.

Apply now

For more information on these programs and to apply, visit:
jobsplan.alberta.ca

WHAT'S NEW IN THE **OIL & GAS INDUSTRY**

PREMIER ADVOCATES FOR TRANS MOUNTAIN PIPELINE EXPANSION

Alberta Premier Rachel Notley took to the road in late November to talk about the benefits of the Trans Mountain pipeline expansion, a project that would see Alberta crude shipped to the British Columbia coast and allow for access to overseas markets.

During her tour, the premier spoke to business audiences in Toronto, Ottawa, Calgary and Vancouver.

"I think the government of B.C. more and more is getting to the point where they understand this decision has been taken and so really this is about building support for it [Trans Mountain] among the population," she told reporters following a November 22 speech to the Calgary Chamber of Commerce.

"People outside the Lower Mainland support it because it has a very clear economic benefit to the interior of B.C. and it's just about having more of an opportunity to talk more to people in the Lower Mainland about where this can also help them."

In her speech, Notley called on those present to join her government in its fight to get a pipeline built to tidewater to address the urgent need to diversify Alberta's export markets and get a better price for its resources for the future of the province and of the country.

Asked later by a reporter about her credibility in delivering the message of support for the Kinder Morgan Canada project, Notley suggested that in many ways her government might be more likely to be heard than others.

"I think that people believe we have a fair degree of credibility on matters of environment, on matters of Indigenous consultation and accommodation, on matters of community respect and engagement," she said.

"With all that in mind, I have very clearly determined that part of our other job, which is to support working people, that this is actually the best solution."

British Columbians have legitimate questions about the Trans Mountain expansion and they deserve legitimate answers, she said. "They deserve to know the project is safe and deserve the best protection for Canada's marine coast."

It was Alberta's climate leadership plan, developed with industry, that led to the federal government approval in November 2016 to approve the Trans Mountain expansion, "a historic accomplishment for which all credit goes to the people of Alberta and Alberta's energy industry," said the premier.

ALBERTA OIL AND GAS JOBS RECOVERY CONTINUES

Alberta's labour market continues to recover, largely as workers return to jobs lost during the downturn—notably in the non-renewable resource industry, says the finance minister.

"The ones that were lost are coming back, and that is in the oil and gas sector and that is in the affiliated trades that support the oil and gas sector, as well as in areas such as housing starts and new businesses starting up," Joe Ceci told a November 29 news conference as the government released its fiscal second-quarter update.

He added: "Those are the kinds of jobs we are seeing. They came back first in the oil and gas sector because those were... lost first, but [jobs] are going to be diversifying across the economy as diversification takes hold."

As of October 2017, the provincial economy had regained 41,000 of the 62,000 jobs lost during the downturn in commodity prices, led by a 70,000-plus increase in full time positions that offset part time losses. Around 20,000 of those recovered jobs are in the oil and gas sector.

The province projects employment growth of one per cent in 2017 and 1.5 per cent in 2018, which closely aligns with the original budget forecast. The province expects a full return to pre-downturn employment numbers in 2018.

Regarding the 2017 unemployment rate, it too remains largely unchanged from the original eight per cent budget estimates. As the economy improves and jobs growth accelerates, the government anticipates unemployment to decline to 7.6 per cent in 2018. Meanwhile, the number of drilling rigs has doubled 2016 levels for

WHAT'S NEW IN THE **OIL & GAS INDUSTRY** CONTINUED

much of 2017 and retail sales have recovered to pre-recession levels.

Ceci told reporters diversification remains a priority for his government, as it works to make the provincial economy and employment less susceptible to fluctuations in the oil and gas sector.

PROVINCE SAYS NEW $1.4-BILLION PROGRAM WILL HELP SLASH EMISSIONS, IMPROVE COMPETITIVENESS

The Alberta NDP government rolled out a $1.4-billion plan Dec. 5 it says will further help the province's oil and gas industry reduce carbon emissions while making Alberta's oil and gas sector more competitive on a global scale.

The majority of the funding will come from revenues collected from the province's large emitters carbon levy and economy-wide carbon tax. The outlay will be divvied out over seven years.

The single biggest slice of the pie — $440 million — will be directed toward oilsands innovation to help companies increase production and reduce emissions while adjusting to what the province calls "improved rules for large emitters" that were subsequently released this morning.

"Today's announcement will help grow the modern Alberta economy, put more people back to work, attract more investment dollars and continue to show the world that low carbon energy is developed and produced right here in Alberta," Shannon Phillips, minister of environment and parks, said during a Dec. 5 press conference at Calgary's McDougall Centre.

Aside from the $440 million earmarked for oilsands innovation initiatives, the new program will provide $225 million for research and development across sectors, $240 million for industrial energy efficiency projects, $63 million in grants for bioenergy and $400 million in loan guarantees to reduce risk for financial institutions.

"There's a basket of programs here. And what we're trying to do is make sure that there's something at every level to push that innovation forward," Phillips said.

AER TARGETS ADDITIONAL REGULATORY COST SAVINGS

With a track record of $1.9 billion in regulatory cost savings to industry since 2014, the Alberta Energy Regulator (AER) is broadening its scope across the industry, eyeing further savings in terms of reduced red tape.

"There are significant opportunities here," Jim Ellis, AER president and chief executive officer, said in a November 22 interview.

The regulator has set up a centralized team that will look at the entire energy value chain, talking to groups representing drilling contractors, service providers and pipeline companies as well as the producer groups, he said.

The AER initially focused only on the upstream exploration and production group, consulting the Canadian Association of Petroleum Producers (CAPP) and the Explorers and Producers Association of Canada (EPAC), he said. "We kept hitting our targets because there was so much savings to be made there."

The regulator did not really talk to the Canadian Association of Oilwell Drilling Contractors or to other industry groups such as the Petroleum Services Association of Canada (PSAC) or the Canadian Energy Pipeline Association (CEPA) at that time, Ellis acknowledged.

However, in talking to the drillers, the AER found that they are directly affected by some of the regulator's requirements in its regulations and directives.

"We've now said we need to continue to work with CAPP, continue to work with EPAC, but now we have to talk to CEPA... we have to talk to PSAC, the drillers," said Ellis.

"All of these people have a play in the opportunities in Alberta...and even if we don't directly regulate [them], we could be doing something here that actually directly impacts them," he said.

In a presentation to international delegates attending the 2017 Regulatory Excellence Global Summit in Calgary, Ellis emphasized the need for regulatory accountability.

"The private sector is placing increasing pressure on regulatory bodies to be more agile and responsive to changes in technology and market conditions and to simplify cumbersome regulatory processes that impose unnecessary costs and impede innovation and new technology development," he said.

"This has never been more evident than in recent years as the industry is beset by uncertainty and economic hardships."

In Alberta, companies have had to drastically alter their businesses as they fight low commodity prices, he said. "They are demanding innovation from within their own operations and in turn are asking us to be innovative in our regulations." ■

TECHNOLOGY UPDATE

CALGARY-BASED COMPANY HOPES TO SET THE STANDARD FOR PIPELINE LEAK DETECTION

Calgary-based pipeline leak detection company Hifi Engineering has admittedly high ambitions—it seeks to have its fibre optic-based technology become the industry standard for monitoring and leak detection and installed on every pipeline in the world.

After many years of research and development, the technology is gaining traction with two of the biggest pipeline companies in North America, as well as with producers on both sides of the border.

"We will fully admit it is a long and slow sales cycle selling an innovative technology to the pipeline sector. But now that we can demonstrate, through recent announcements...that there are pipeline companies deploying this—so you [as a customer] don't have to be the first, or even the second or third, to deploy—that creates credibility," Steven Koles, Hifi's president and chief executive officer, said in a recent interview.

"We do have a fairly lofty goal of becoming the new world standard as it relates to technology for preventative pipeline leak detection," he added.

The announcement was in regard to the Vigilant control room software installed in the Plains Midstream Canada control room in Olds, Alta., to monitor Plains' pipelines in real time using Hifi's high-fidelity dynamic sensing technology.

Plains collaborated with Hifi last year to deploy the fibre optic-based monitoring system at some pipeline locations. The system works by monitoring high-definition acoustic energy, strain, vibrations and temperature to detect with a high degree of accuracy pipeline leak signatures, geotechnical events such as landslides and floods, and right-of-way security intrusions. The sensing fibre cable can be deployed on the pipe, near the pipe when retrofitted or even inside the pipe.

Plains is now working with Hifi and Baker Hughes, a GE company, to deploy the enhanced presentation software in its control centre. The Vigilant system, developed with GE and powered by GE's Predix platform, provides an "edge-to-cloud" platform that allows for real-time events and alarms to be sent to the control room, including multimedia data such as acoustic recordings from the specific site of the event detected.

SMALL-SCALE CARBON CAPTURE AND UTILIZATION TECHNOLOGY TO BE PILOTED

FortisBC has developed a new carbon capture pilot program for businesses that uses first of its kind carbon capture technology to decrease greenhouse gas (GHG) emissions and save energy.

The technology, produced by Calgary-based CleanO2, reduces the energy usage of commercial boilers that use natural gas and captures and converts CO2 into a usable by-product.

The result is cost savings for the commercial business as well as a reduction in GHG emissions, the Surrey-based electric power and gas distribution/retail company said. Organizations that have already signed on to a six-month pilot include Cadillac Fairview Richmond Centre and Blue Horizon Hotel.

"By developing this pilot program, businesses have access to new technology, which aligns with broad policy goals for carbon reduction," Jason Wolfe, director of energy solutions at FortisBC, said in a statement.

The pilot program was developed to assist in advancing the technologies to commercialization and acceptance in the market. CleanO2, which has received support from Innovate Calgary and Alberta Innovates, has already deployed what it calls the world's first residential carbon capture device in Alberta and is looking to expand its technology on a global scale. ■

THE ENVIRONMENTAL FILE

ALBERTA'S OIL AND GAS INDUSTRY USING LESS POTABLE WATER

Alberta's energy industry is getting more production using less potable water.

Last year, industry used the same amount of non-saline water as in 2013 despite a 44 per cent increase in production, according to new report from the Alberta Energy Regulator (AER) designed to drive improved performance from the industry.

Alberta Energy Industry Water Use provides data on water used in a number of production methods for oil and gas, from hydraulic fracturing and enhanced oil recovery (EOR) to mineable and in situ oilsands.

"Albertans depend on us to make sure the energy industry is using water in a responsible manner," says Jim Ellis, president and chief executive officer of the AER. "This report provides Albertans with a better understanding of how water is being used to produce oil, gas and bitumen."Energy development forms a small part of all non-saline water allocated in the province, accounting for approximately 10 per cent. The remaining 90 per cent is allocated to other users, such as agriculture, forestry, commercial (e.g., golf courses, gravel pit operations) and municipal. But of that 10 per cent allocated to energy, only roughly 22 per cent was used, meaning that only 2.2 per cent of all non-saline water allocated in the province was used for energy development last year.

In addition to non-saline water, companies may also use alternative water sources, such as saline groundwater, produced water, wastewater or recycled hydraulic fracturing water. While they do not have to apply to the AER to use saline water, companies are required to report how much they've used.

The report shows oilsands mining continues to be the largest user of non-saline water. Over the past five years, an average of 2.7 barrels of water was needed to produce one boe compared to hydraulic fracturing, EOR and in situ, which averaged less than 0.5 barrels of water per boe.

SLOW BUT STEADY PROGRESS BEING MADE ON METHANE REDUCTION DRAFT REQUIREMENTS

The provincial government's Methane Reduction Oversight Committee (MROC) has wrapped up its engagement process on draft requirements for methane emission reductions but work is continuing, a government spokesperson said December 1. "We have made some progress and there will be more to say soon," said Mike McKinnon, press secretary to Energy Minister Margaret McCuaig-Boyd, in an interview.

Initially led by the Alberta Energy Regulator (AER), the oversight committee had concluded its work in July but was re-established under the leadership of the Alberta energy department. A series of meetings, chaired and facilitated by the government, were held in Calgary in November to advise the government and the AER on the regulatory design of the draft directives.

The MROC was considered an advisory committee in the meetings to provide feedback and recommendations to the government and the regulator who will make the final decisions on regulatory requirements.

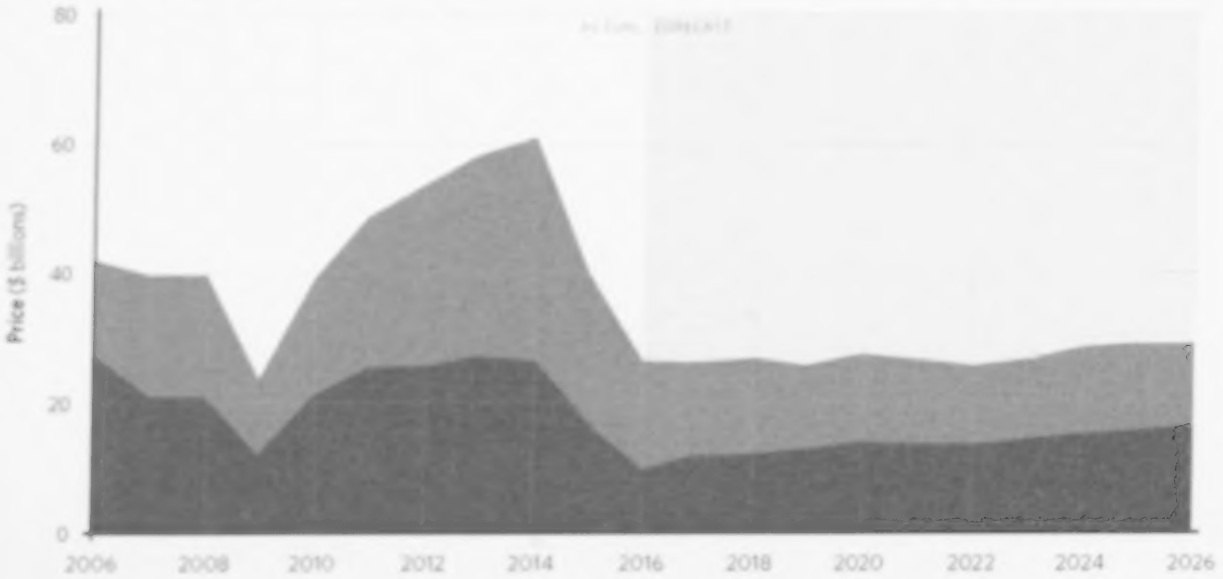
Under its climate leadership plan, the Alberta government is committed to reducing methane emissions by 45 per cent from 2014 levels by 2025, in line with federal government requirements.

In a Nov. 9, 2017, letter to members of the multi-stakeholder committee announcing the meetings, McCuaig-Boyd said the MROC had helped establish the foundation of a made-in-Alberta plan while protecting jobs, economic growth and the competitiveness of the oil and gas sector.

She went on to say that the next steps would require a "renewed commitment to work together toward broad alignment on key areas to ensure our plan is achievable and supported by a broad range of stakeholders." ■

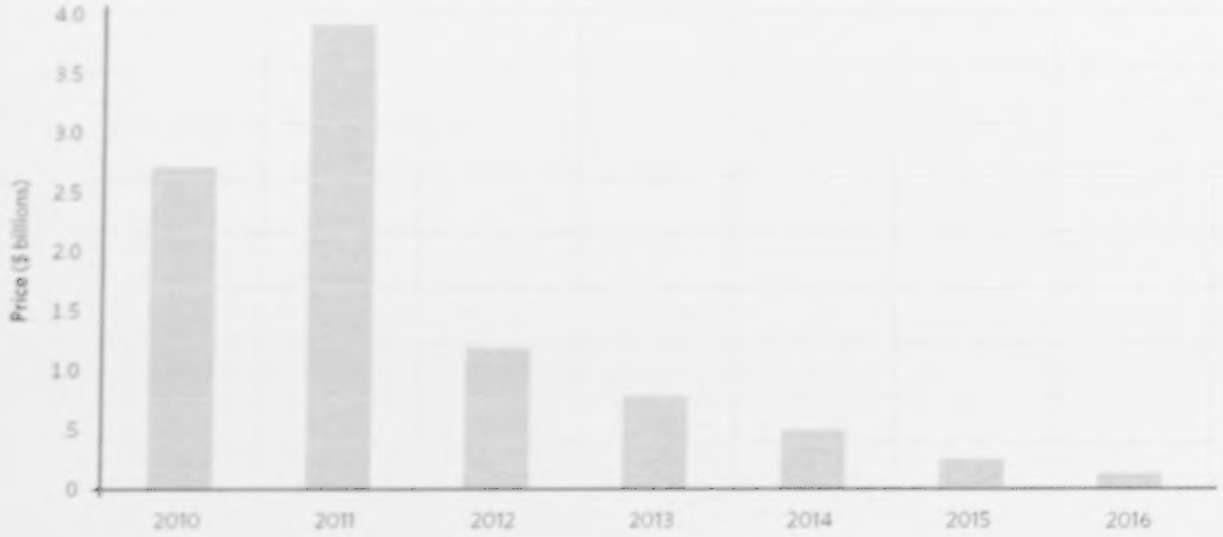
OIL & GAS STATISTICS

INVESTMENT IN ALBERTA OIL AND GAS SECTOR



Historical values sourced from the Canadian Association of Petroleum Producers. Figures post-2016 are estimated.

ALBERTA CROWN LAND SALES Petroleum and natural gas rights, excluding oil sands



DRILLING RIG COUNT BY PROVINCE/TERRITORY

Nov. 28, 2017

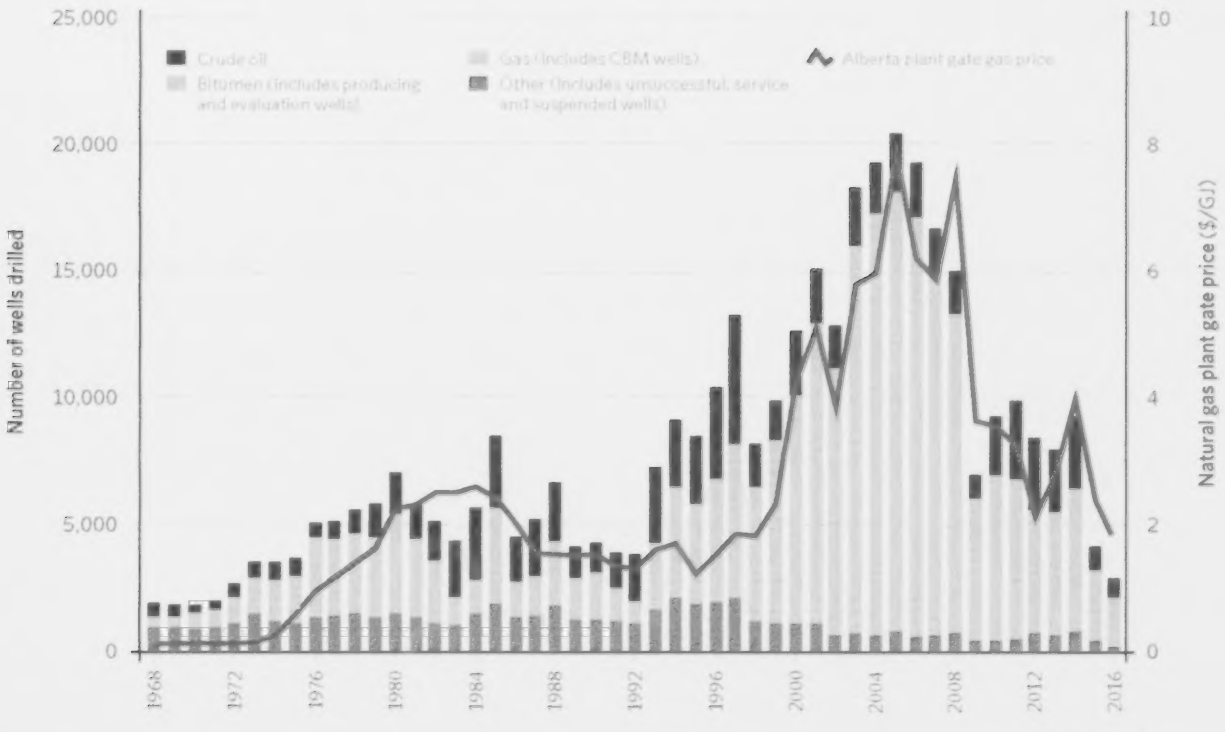
	ACTIVE	DOWN	TOTAL	ACTIVE
Western Canada				(Per cent of total)
Alberta	161	276	437	37
British Columbia	27	36	63	43
Manitoba	3	8	11	27
Saskatchewan	31	89	120	26
WC total	**222**	**409**	**631**	**35**

OIL AND GAS WELL COMPLETIONS BY PROVINCE

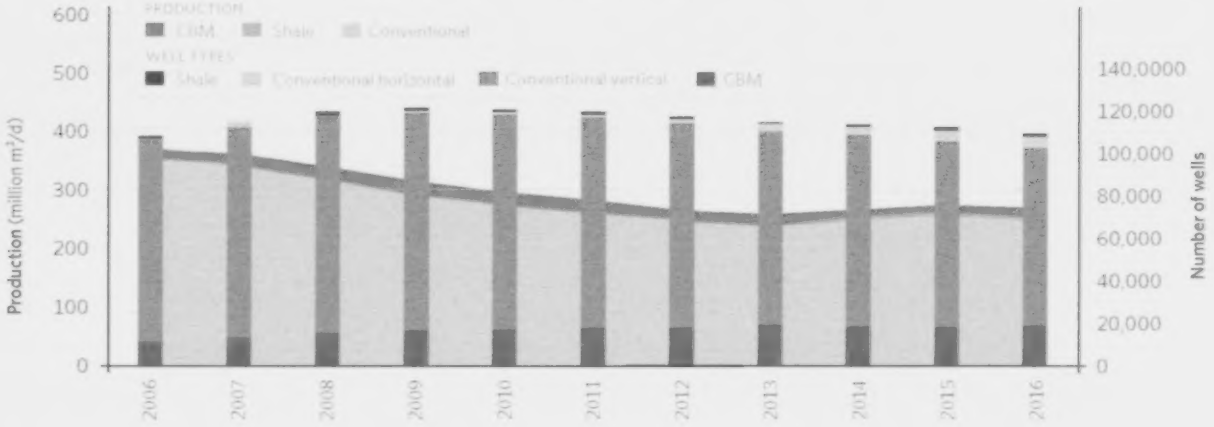
November 2017

	OIL WELLS		GAS WELLS	
Western Canada	Nov '16	Nov '17	Nov '16	Nov '17
Alberta	51	191	26	106
British Columbia	8	-	5	74
Manitoba	3	25	-	-
Saskatchewan	111	170	-	-
WC total	**173**	**386**	**31**	**180**

DRILLING ACTIVITY IN ALBERTA, 1968-2016

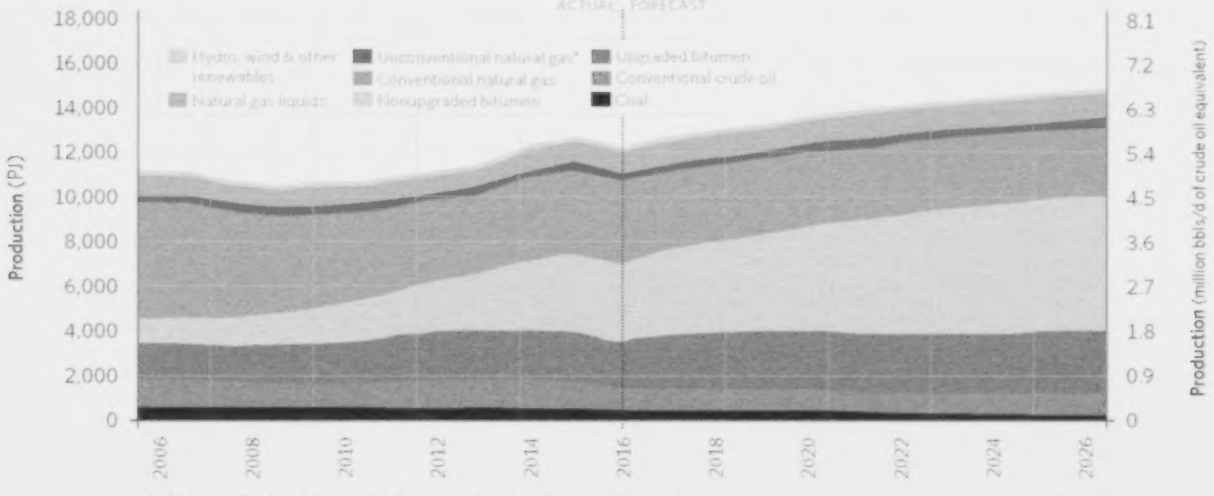


ALBERTA MARKETABLE GAS AVERAGE DAILY PRODUCTION AND PRODUCING WELLS



ALBERTA CRUDE OIL PRODUCTION AND PRODUCING WELLS

TOTAL PRIMARY ENERGY PRODUCTION IN ALBERTA



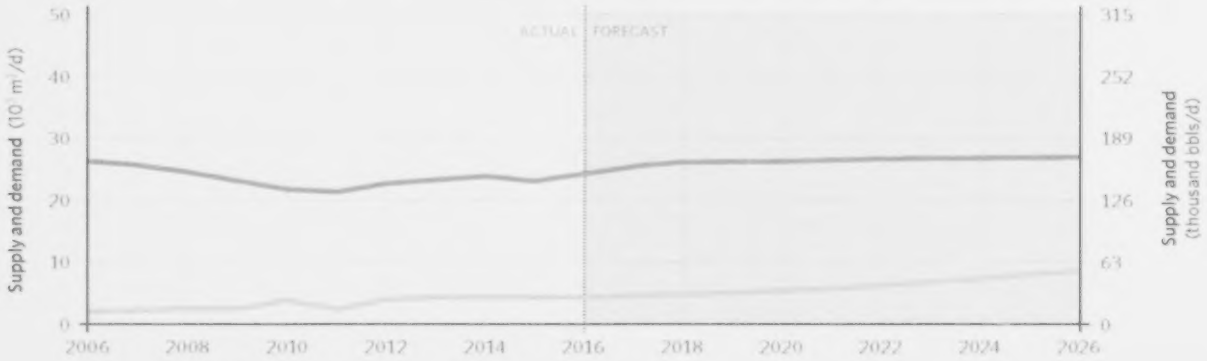
*Includes coalbed methane and shale gas. Post-2016 values are estimated.

NATURAL GAS LIQUIDS STATISTICS

BUTANES SUPPLY FROM NATURAL GAS AND DEMAND

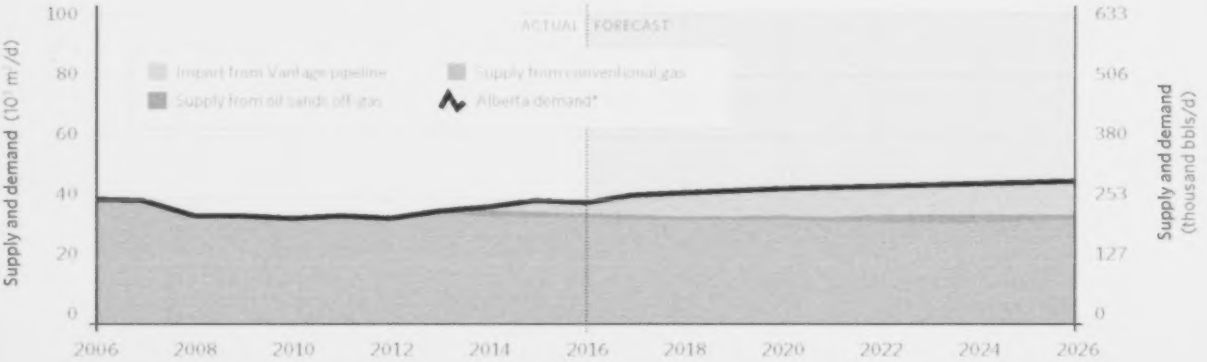
*Excludes solvent flood volumes. 2016 values are estimated.

PROPANE SUPPLY FROM NATURAL GAS AND DEMAND



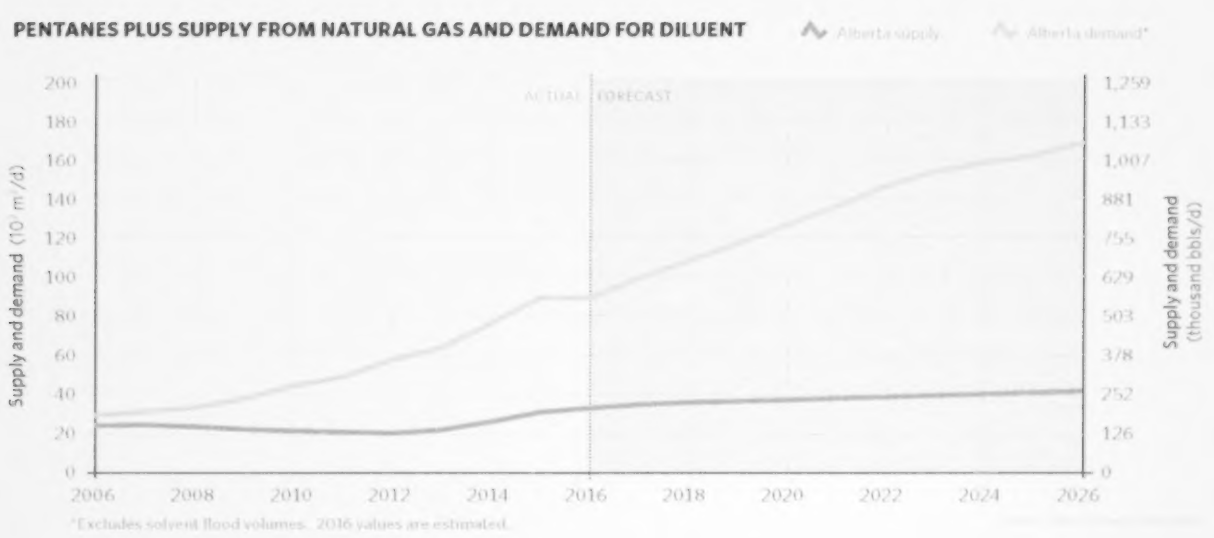
*Excludes solvent flood volumes. 2016 values are estimated.

ETHANE SUPPLY AND DEMAND



*Excludes solvent flood volumes. 2016 values are estimated.

PENTANES PLUS SUPPLY FROM NATURAL GAS AND DEMAND FOR DILUENT



*Excludes solvent flood volumes. 2016 values are estimated.

NORTH AMERICAN NGL PRICES

Note: Mt. Belvieu's field grade butane equivalent value is calculated by adding 70% of the value of the Mt. Belvieu Enterprise normal butane price to 30% of the value of Mt. Belvieu Enterprise isobutane price, to allow for comparison with Edmonton benchmark.

Alberta

Capital Investment Tax Credit (CITC)

Are you an Alberta-based business conducting manufacturing, processing or tourism infrastructure activities? Are you looking to make an investment of at least $1 million in value?

If so, you can apply for a 10 per cent tax credit on eligible capital expenditures, up to a maximum of $5 million.

For more information on how and when to apply for the CITC, visit: jobsplan.alberta.ca or email citc.program@gov.ab.ca

We listened to business leaders' ideas to create the Alberta Jobs Plan. This included implementing new tax credits, providing training for aspiring entrepreneurs, adding supports for established ones, increasing access to capital and cutting the small business tax.

Together, we are creating new jobs, diversifying Alberta's economy and making the lives of Albertans better.

CONTACTS

ALBERTA GOVERNMENT

Alberta Advanced Education
www.iae.alberta.ca

Alberta Energy
www.energy.alberta.ca

Alberta Energy Regulator
www.aer.ca

Alberta Environment and Parks
www.aep.alberta.ca

Alberta Geological Survey
www.ags.aer.ca

Alberta Innovates
www.albertainnovates.ca

Alberta Surface Rights Board
www.surfacerights.alberta.ca

INDUSTRY ASSOCIATIONS

Alberta Land Surveyors' Association
www.alsa.ab.ca

Canada's Natural Gas
www.canadasnaturalgas.ca

Canadian Association of Geophysical Contractors
www.cagc.ca

Canadian Association of Oilwell Drilling Contractors
www.caodc.ca

Canadian Association of Petroleum Producers
www.capp.ca

Canadian Energy Pipeline Association
www.cepa.com

Canadian Natural Gas Vehicle Alliance
www.cngva.org

Canadian Society for Unconventional Resources
www.csur.com

Canadian Society of Exploration Geophysicists
ww.cseg.ca

Canadian Society of Petroleum Engineers
www.speca.ca

Explorers and Producers Association of Canada
www.explorersandproducers.ca

Gas Processing Association of Canada
www.gpacanada.com

Petroleum Services Association of Canada
www.psac.ca

Petroleum Technology Alliance Canada
www.ptac.org

FOR MORE INFORMATION, PLEASE VISIT

www.albertacanada.com

Alberta
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Feedback, questions and comments on this issue of the *Alberta Oil & Gas Industry Quarterly Update* are welcomed.
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